Indo-US
Financial Institutions
Reform and Expansion Project -
Debt Market Component
FIRE(D)

Project Notes

Tools for Developing Commercially Viable Urban Environmental Infrastructure Projects

Note No. 1
January
1998

Urban centers are the engines of economic growth, and infrastructure is an essential element of the economic growth equation. The demand for urban environmental services is growing faster than cities' ability to supply them, and many municipalities are feeling financially overwhelmed. While municipalities are seeking alternative sources of funding, many private sector investors consider urban infrastructure to be too risky. The private sector will only provide the necessary resources if projects are commercially viable, sound investments.

For three years, USAID's FIRE(D) Project has worked with Indian cities, financial institutions and policy-makers to develop sound approaches to the development of commercially viable infrastructure projects. During these three years, a variety of tools and resources have been developed to assist urban managers, and to facilitate the identification, selection, development and financing of commercially viable urban infrastructure projects. These tools and papers represent a collaborative effort and are developed based on experiences of the FIRE(D) Project in association with city officials, financial institutions, consultants and other experts. The FIRE(D) Project acknowledges the contribution of all these institutions and individuals.

funded by
United States
Agency for
International
Development

Tools for Identification and Development of Commercially Viable Urban Infrastructure Projects

• Environmental Status Report Framework

The process of urbanization in post-independence India has been a major feature of development, and with this growth and development, the urban environment is increasingly under pressure. Following the 1994 mandate under the 74th Constitutional Amendment Act by the State of Maharashtra that local bodies prepare annual environmental status reports, FIRE(D) assisted the City of Pune to prepare India's first city-level Environmental status Report. This report was prepared by the Pune Municipal Corporation in association with the FIRE Project and MASHAL, a local NGO, which was supported by the National Institute of Urban Affairs. The goal of the report is to help identify the priorities for municipal finance decisions and to evolve an action agenda in different sectors.

Part I proposes a framework for assessing environmental conditions in a city and describes the process of producing a status report, which includes consultation with local groups to identify concerns; mapping of urban environmental resources and services; and detailed sectoral studies.

Part II presents the first status report for the city of Pune, which discusses demographic and economic trends, land use patterns, municipal and

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transportation services, environmental pollution and the impact on public health. The report concludes with a review of public institutions, community groups andother organizations which should have a role to play in managing Pune's urban environment.

• City Infrastructure Priorities Assessment

Investment decisions in the urban infrastructure sector in India have largely been ad hoc, limited by inadequate surpluses and the lack of integrated planning. Local bodies themselves are constrained by a lack of power to raise resources by way of taxes or user charges. The concept of planning and cost recovery is not new, but it has been neglected. The City Infrastructure Priorities approach is an attempt to integrate physical planning with finance and operations to produce a Financial and Operating Plan that realistically reflects the needs, goals and resources of a local body.

The three step approach begins with a situation analysis, reviewing population and economic trends, municipal finances and current and projected service gaps. Next, these gaps are translated into projects, which are then assessed in terms of costs and benefits as well as lending terms, pricing mechanisms and the potential for private sector involvement. Finally, through a process of prioritization, a Financial and Operating Plan is developed that reflects the city's physical needs, priorities and financial capacity. The approach of the City Infrastructure Priorities Assessment was developed by the FIRE Project in association with Kirloskar Consultants, Ltd, Chennai. It has been tested in two cities: Tiruppur and Vijayawada.

• Project Pre-Identification Report Formats

These development tools are designed to serve as the first, most basic step in assessing the potential for devoting resources to commercial structuring of a project. Project report formats solicit basic information for proposed projects and facilitate the assessment of the commercial potential of a project. If the basic conditions that emerge from the pre-identification report appear to be strong, it is advisable to pursue project development further and to conduct a Pre-Feasibility Analysis, which is a more detailed financial viability and institutional analysis.

• Project Pre-Feasibility Analysis

This development tool represents the second level of project selection analysis. Stage I is designed to assess the commercial viability of a proposed project. This includes the FIREFAM financial analysis model, a standard spreadsheet package which assists in calculating the rate of return on investments by analyzing the costs and revenues of a project, sector or system. Stage II assesses institutional arrangements and presents options for mitigation of related risks and adverse factors.

This analysis can be used by service agencies such as municipal development authorities, state and metro water and sewerage boards, industrial development corporations, and new independent companies proposed for specific projects. Based on the outcome of Stage I, the service authority may approach a financial intermediary or the state government for permission to borrow. Stage II is expected to be conducted with direct support from a financial intermediary, state government or specially appointed financial advisors.

• Pricing and Cost Recovery Methodology

Historically, fees charged for urban environmental services have been extremely low and do not have any relation to the actual cost of the service or the public's demand for it. It will not be possible to meet investment demands unless the rate of return is enhanced and rates are increased, which is politically difficult. Efforts toward serious rate revision require a new perspective which incorporates overall city management and priorities, as well as future sectoral needs and ongoing maintenance and operations.

The FIRE(D) Project developed two approaches to pricing and cost recovery for urban infrastructure. The first approach addresses water supply from a sectoral perspective. Using this approach, FIRE(D) worked with Tiruppur Municipality in developing a full cost recovery strategy for the Tiruppur municipal water supply. The proposals include a politically acceptable one-time major increase with annual indexation of water charges in subsequent years.

The second approach takes a city-level perspective that identifies sectoral trends and provides future sector analysis. Using this approach, FIRE(D) Project prepared a paper on pricing and cost recovery for urban infrastructure for the city of Pune. Based on patterns of budgetary transfers made by the Pune Municipal Corporation, two scenarios were presented along with a variety of rate revisions which would yield revenues necessary to sustain planned investments. This tool also presents other issues not addressed by the analysis, such as the need for participatory planning to identify user priorities, the capacity of management to undertake investments, and the simplification of pricing structures.

•Willingness to Pay for Urban Water and Sanitation in India

The issue of appropriate pricing and cost recovery from water supply and sanitation service has received increasing attention, and until recently, focus has been on the supply side of the issue. The demand side, however, is also important and policy and planning should be built on a better understanding of what services people want and what they are willing to pay for them.

This report briefly summarizes willingness-to-pay studies that have been conducted in rural areas of Pakistan, India, Morocco, Nigeria, Kenya and Ghana, and presents a detailed discussion of a study done in Baroda, India, one of the first in an Indian urban area, as a basis for a model methodology and guidelines for future studies. As a project development tool, this document presents a methodology to determine consumer preferences and willingness to pay as a basis for appropriate investment and pricing strategies for urban environmental services.

• Municipal Bond Experiences: Potential and Relevance for India

If India is to develop a commercial debt market for urban infrastructure, new approaches to debt structuring will be necessary. One approach is the use of municipal bonds, which has been successfully demonstrated in the USA and in Europe. In Asia, cities are now in the process of adapting the municipal bond model for financing local infrastructure.

With this in mind, the FIRE(D) Project and the National Institute for Urban Affairs sponsored a national workshop in December, 1995, which brought together experts from urban and financial sectors. The workshop provided an opportunity for a critical review of U.S. and other country experiences in relation to developing a municipal bond system in India, and helped identify emerging policy issues for accessing capital markets for urban infrastructure in India. Volume 1 of the workshop proceedings presents the background for the workshop and summarizes workshop presentations and discussions on country experiences with municipal bonds and the potential for developing a municipal bond system in India. Volume 2 contains copies of papers presented at the workshop, including the keynote address and papers on country experiences in the USA, Philippines and India.

Tools for Urban Managers

Sound urban management is the foundation on which commercially viable projects must be built, and a variety of tools and resources have been developed which can help empower municipal managers.

• Urban Performance Indicators System

A comprehensive and regularly updated information base of a city's actual performance is an important part of any planning and management activity. While raw data is generally available in most cities, compilation and analysis is often lacking. A comparative database of appropriate indicators would add transparency to the process of city planning and management by providing a trend analysis for a city, as well as a comparative analysis of how well it performs in relation to other cities. Standardized indicators also enable comparative assessment across cities, either within a state or across the country.

This tool suggests an approach to developing an Urban Performance Indicators System (UPIS) as a useful tool for planners and managers in the public sector, as well as citizens' groups, NGOs and the private sector. Two types of systems are suggested: a city level indicator system, with extensive indicator coverage, and a comparative indicators system, enabling comparative assessment across cities.

Information would fall in three domains: financial situation and management; service effectiveness and efficiency; and urban competitiveness, and a list of key indicators is suggested. The paper concludes with a proposal for the creation of a UPIS for the state of Maharashtra.

• Accounting Standards and Technical Guidelines for Municipalities

Municipal accounting systems provide vital information on which key decisions are made. The FIRE(D) Project has developed a variety of tools and other resources that can be used by local bodies to analyze and reform their accounting systems to provide financial information in a useful format. The Institute of Chartered Accountants of India (ICAI), a premier accounting body, has set up a national level committee to produce an approach paper for development of technical guidelines / financial reporting standards for local bodies.

Municipal Accounting Systems: Fundamental Concepts explains the basic principles of fund (governmental) accounting and outlines strategies and time frames for accounting system reform. Fund accounting provides that each governmental activity, particularly those that generate revenue, be operated on a separate set of accounts. This is particularly helpful if, for example, a government chooses to ascertain whether or not a particular activity is operating on a cost-recovery basis.

Accounting for Urban Local Bodies in India: Best Practices reviews reforms which have been implemented in Baroda, Ahmedabad, Madras and Tamil Nadu, and identifies common factors impeding financial reform. Recommendation for enhancing financial management in urban local bodies in India, such as creation of a standard-setting body for governmental accounting and auditing, are also provided.

Workbook on Preparation of Financial Statements: A Case of Hyderabad was developed from lessons learned while working with the Municipal Corporation of

Hyderabad. The financial statements (statement of assets and liabilities, and statement of excess revenues over expenditures) were prepared on an accrual / modified accrual basis from single entry cash-based accounts and other records of the Corporation.

• **Innovative Project Management Systems**
The City and Industrial Development Corporation (CIDCO) of Maharashtra provides an innovative example of project management systems for urban development projects. CIDCO has deviated from the traditional approach to construction by involving as many professional talents from the private sector, which allows it to undertake large projects without increasing department overheads. This approach also ensures high quality design by enlisting professionals and turnkey developers, and projects are completed on schedule through better daily supervision with total quality control. *Innovative Project Management Systems for Urban Development Projects: An Experience of CIDCO in Navi Mumbai* provides a brief profile of CIDCO and its use of professional Project Management Consultants from the private sector, through three case studies drawn from the housing and infrastructure sectors.

• **Non-Tax Revenue Generation: Innovative Approaches for Municipalities**
The search for new sources of income by local governments in the United States has been challenged by legal constraints imposed by voters. As a result, less reliance on taxes and increased use of charges on individual parties demanding particular services has become commonplace. Widespread acceptance of impact fees for many different capital needs caused by new customers, as well as innovative applications of traditional funding formulas such as special assessments, user charges and fees has occurred.

This report discusses the background and causes of this shift in financing attitudes by US cities and counties, and offers the example of Orlando, Florida as a proxy for similar growth-driven communities. Case studies of actual financial decisions are given, with positive and negative characteristics noted. A list of 15 diverse income sources is included to illustrate the range of new funding opportunities that should be considered. The report concludes with a list of supplementary materials available on the calculation of impact fees, regulatory language and official policy regarding services and impact fees.

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These and other tools and resources can be requested through the FIRE(D) Project Office listed in the box at the right.

Indo-US Financial Institutions Reform and Expansion Project Debt Market Component FIRE(D)

The objective of the Indo-US Financial Institutions Reform and Expansion (FIRE) Project, funded by the U.S. Agency for International Development (USAID), is to support the Government of India in its efforts to strengthen domestic capital markets to enable them to serve as efficient source of development finance. The Debt Market / Infrastructure Component (FIRE-D) pursues this goal through the development and financing of commercially viable urban environmental infrastructure projects; by channeling USAID Housing Guaranty funds to selected demonstration cities and states; and through policy advocacy, management support, technical assistance, training and research.

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Funded under
USAID Contract No. 386-0531-C-00-5027-00

The *Project Notes* series is edited and produced by Laurie de Freese
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